**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (Currently amended) A method for increasing the proliferation of thymocytes in a non-human animal comprising:

altering an endogenous gene encoding $p27^{Kip1}$ in an isolated thymocyte, or an isolated ~~multipotent~~ hematopoietic cell that differentiates into a thymocyte, of the animal to cause a functional deficiency of cyclin-dependent kinase inhibitor function of $p27^{Kip1}$,

introducing the altered cells having the functional deficiency of cyclin-dependent kinase inhibitor function of $p27^{Kip1}$ to the animal thereby increasing the proliferation of thymocytes in the animal, and

monitoring the animal to detect the increase in thymocyte proliferation.

2. (Currently amended) The method of claim 1, wherein the ~~multipotent~~ hematopoietic cell is a bone marrow cell.

3. (Original) The method of claim 1, wherein the animal is a rodent, pig, sheep, frog, or bovine.

4. (Previously presented) The method of claim 1, wherein the gene encoding $p27^{Kip1}$ is altered by insertion of a positively selectable marker gene, mutation of the gene encoding $p27^{Kip1}$, or deletion of the gene encoding $p27^{Kip1}$.

5. (Previously presented) The method of claim 4, wherein the gene encoding $p27^{Kip1}$ is altered by insertion of a positively selectable marker gene into the gene encoding $p27^{Kip1}$.

6. (Previously presented) The method of claim 5, wherein the positively selectable marker gene encodes neomycin resistance, thymidine kinase, adenine phosphoribosyl transferase, hypoxanthine-guanine phosphoribosyl transferase or dihydrofolate reductase.

7. (Previously presented) The method of claim 6, wherein the positively selectable marker gene encodes neomycin resistance.

8. (Previously presented) The method of claim 1, further comprising:

introducing a plasmid into the insolated cell, wherein the plasmid comprises the gene encoding $p27^{Kip1}$ altered by insertion of a positively selectable marker gene.

9. (Previously presented) The method of claim 8, wherein the plasmid further comprises a negatively selectable marker gene adjacent the altered gene encoding $p27^{Kip1}$, whereby the distance between the negatively selectable marker gene and the altered gene encoding $p27^{Kip1}$ is sufficient to allow homologous recombination between the altered gene encoding $p27^{Kip1}$ and the endogenous gene encoding $p27^{Kip1}$ in the cell.

10. (Previously presented) The method of claim 9, wherein the negatively selectable marker gene encodes thymidine kinase.

11. (Original) The method of claim 8, wherein the plasmid is delivered to the cell by electroporation, microinjection or transformation.